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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/796,766

03/09/2004

Stefaan De Meutter

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10/05/2005

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EXAMINER

FEIGGINS, KRISTAL J

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/796,766

Applicant(s)

DE MEUTTER ET AL.

Examiner

K. Feggins

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2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-9 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/9/2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2 & 4-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaerts et al. (EP 1 247654 A1).

**Kaerts et al. disclose the following claimed limitations:**

\* regarding claim 1, a thermal head printer with image-invariant printing speeds for printing a substantially light-insensitive thermographic material having a print density-driving power level characteristic (Abstract);

\* said thermal head printer comprising a transport means, one or more thermal heads each having an array of heating elements, a thermal print head drive system capable of supplying power to each of said printing elements, and a calibration means based on said print density-driving power level characteristic of said thermographic material (para 0020-0044, figs 1-2).

\* regarding claim 2, wherein the maximum driving power applied to said thermographic material during said printing process is adjusted as a function of said print density-driving power level characteristic of said thermographic material (para 0020-0044, figs 1-2).

\* regarding claim 4, wherein said thermal head printer further comprises at least one densitometer capable of measuring the print density of a print produced with said thermal head printer (para 0020-0044, figs 1-2).

\* regarding claim 5, wherein said thermal print head drive system is capable of being calibrated by using the dependence of print density upon power supply level for said substantially light-insensitive thermographic material (para 0020-0044, figs 1-2).

\* regarding claim 6, a process for calibrating a thermal head printer with image-invariant printing speeds (Abstract);

\* said thermal head printer comprising one or more thermal heads each having an array of heating elements connected to a power supply capable of supplying a given number of heating element driving power levels from 0 to a maximum driving power level number, corresponding to  $P_{sub.max}$ , to each heating element for printing a substantially light-insensitive thermographic material by image-wise heating said thermographic material with said heating elements (Abstract);

\* said process comprising the steps of: (i) putting said printer into a calibration mode (para 0020-0044, figs 1-2);

\* (ii) printing one or more step-wedges of print densities by heating said thermographic material with said heating elements at different DPLN's

\* (iii) determining the optical density of each step of said step-wedge(s) of print densities with a densitometer thereby obtaining the dependence of said print density upon DPLN (para 0020-0044, figs 1-2);

\* (iv) deriving from said dependence, or all said dependences of said print density upon DPLN, a single smoothed dependence of the rate of change of print density,  $D$ , with DPLN,  $\Delta D / \Delta \text{DPLN}$ , as a function of DPLN for said thermographic material (para 0020-0044, figs 1-2);

\* (v) establishing a threshold rate of print density change per DPLN for the specific thermographic material being printed (para 0020-0044, figs 1-2);

\* (vi) setting up said thermal head printer so that said threshold rate of print density increase per DPLN cannot be undercut (para 0020-0044, figs 1-2).

\* regarding claim 7, wherein said one or more step wedges of print densities are printed simultaneously (para 0020-0044, figs 1-2).

\* regarding claim 8, wherein steps (i) to (iv) are repeated at different places on said thermographic material to obtain further dependencies of said print density upon said heat produced by said heating elements for said thermographic material (para 0020-0044, figs 1-2).

\* regarding claim 9, a process for printing a substantially light-insensitive thermographic material with a thermal head printer with image-variant printing speeds,

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said thermal head printer comprising one or more thermal heads each having an array of heating elements connected to a power supply capable of supplying a given number of heating element driving power levels from 0 to a maximum driving power level number, corresponding to  $P_{sub,max}$  (Abstract);

\* said process comprising the steps of: calibrating said thermal head printer, transporting the substantially light-insensitive thermographic material past the thermal head, and image-wise heating of the substantially light-insensitive thermographic material by means of said heating elements, wherein said calibration comprises the steps of: (i) putting said printer into a calibration mode (para 0020-0044, figs 1-2).;

\* (ii) printing one or more step-wedges of print densities by heating said thermographic material with said heating elements at different DPLN's;

\* (iii) determining the optical density of each step of said step-wedge(s) of print densities with a densitometer thereby obtaining the dependence of said print density upon DPLN (para 0020-0044, figs 1-2);

\* (iv) deriving from said dependence, or all said dependences of said print density upon DPLN, a single smoothed dependence of the rate of change of print density,  $D$ , with DPLN,  $\frac{\Delta D}{\Delta DPLN}$ , as a function of DPLN for said thermographic material (para 0020-0044, figs 1-2);

\* (v) establishing a threshold rate of print density change per DPLN for the specific thermographic material being printed; (para 0020-0044, figs 1-2);

\* (vi) setting up said thermal head printer so that said threshold rate of print density increase per DPLN cannot be undercut (para 0020-0044, figs 1-2).

***Allowable Subject Matter***

3. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The primary reason for indicating allowable subject matter of claim 3 is the inclusion of the limitations of a thermal printer that includes a driving power level in said print density-driving power level characteristic of said thermographic material is rendered dimensionless by normalization. It is this limitation found in the claims, as it is claimed in the combination of that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kaerts et al. (5,796,420) disclose a method for correcting input data across the head for unevenness in a thermal printing system. Hauschild (US 5,469,203) disclose a parasitic resistance compensation for a thermal print head.

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### **Communication With The USPTO**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Feggins whose telephone number is 571-272-2254. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talbott Dave can be reached on 571-272-1934. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*K. Feggins* 9/05  
**K. FEGGINS**  
**PRIMARY EXAMINER**